CHAPTER 4

# Management Strategies

The countywide transportation system is a system of multiple transportation modes—automobile, bus, rail, bicycle, walking—that is managed by multiple agencies. Planning, investment and operation must be done cooperatively among these agencies for the system to function efficiently despite increasing population and employment. Better coordination between transportation and land use planning is needed to ensure that the County's growth can be accommodated without harming the environment. Pricing policies are needed to improve efficiency of the existing transportation infrastructure, reduce congestion and accelerate progress toward clean air and reduced greenhouse gases.

**Updates of this Plan are necessary to ensure the most appropriate mix of transportation improvements.**

The strategy of system management is organized into three parts: funding policies, planning guidelines and pricing policies and other incentives.

## FUNDING POLICIES

Funding policies are intended to ensure that enough money is dedicated to the maintenance, operation and operational improvement of existing facilities and services. They are also intended to ensure efficient operation of those facilities and services that are most essential for the movement of freight.

### Maintenance and Operation of Existing Facilities—A Priority

With the aging of Alameda County's transportation infrastructure—streets, roads and highways—comes a greater need to spend money on maintaining and fixing these facilities. For this reason, the share of the state highway budget committed to maintenance and rehabilitation has increased significantly since the 1970s. Local agencies in Alameda County have been unable to keep pace with that commitment. The result is a growing backlog of facilities that require maintenance. Added to the maintenance backlog for streets and roads is the need to maintain other infrastructure such as sidewalks, drainage, street lighting and seismic retrofit of local bridges.

The need to fix and replace transit capital—stations, trackage, stops and vehicles—also will continue to grow as transit service expands. In addition, reliable funding to operate transit services presents a similar problem. Historically, funding available for transit operations has lagged behind the growth of the cost of those operations, forcing agencies to cut service and wait longer than advisable to perform maintenance.

MTC estimates a capital replacement shortfall for BART and AC Transit of $3.3 billion. This is the gap between available operating revenues and revenues required to operate service and maintain infrastructure and equipment through the year 2035. If no funding is identified, the gap would force the curtailment of existing service, the deferral of necessary maintenance or the deferral of planned investment.

The obligation to pay for backlogged maintenance should not be passed on to the next generation. Simple fairness requires that each generation pay for maintaining the transportation system in working order. It is partly with this philosophy that the Alameda County voters adopted the continuation of a half-cent sales tax to provide additional funds for transit operations and local road maintenance. However, funding for transit capital replacement must come from scarce state and federal transportation resources.

**It is the CMA's goal that the maintenance backlog be eliminated within 25 years.**

At the same time, fairness to present users requires that operating existing service have precedence over expanding service. This is particularly true for transit. In a forced choice between reducing service and expanding service elsewhere, fairness requires that service expansion wait until more funding is identified.

Finally, jurisdictional equity requires that each area of the County bear the burden of any forced trade-off between the maintenance of existing facilities and the construction of new ones. Each area should bear the responsibility for any history of deferred expenditure.

Consistent with this logic, it is the CMA's goal that the maintenance backlog be eliminated within 25 years—that is, within the present generation. Achieving this goal will require additional revenues or the deferment of some new capital investment. To reinforce this goal, the CMA Board adopted a Local Street and Road Rehabilitation and Transit Capital Replacement Policy in March 2008 that states:

- The update of the RTP should continue its current "fix it first" commitment to local street and road rehabilitation and transit capital replacement by:
  - Apportioning sufficient funding to rehabilitate the pavement of streets and roads identified as part of the MTS; and
  - Apportioning sufficient funding to replace Score 16 transit assets, generally revenue service transit vehicles and fixed guideway.
- Consistent with its "fix it first" policy, MTC should give highest priority for discretionary federal funds in the RTP update to local street and road rehabilitation and transit capital replacements, as defined above.

The full policy is found in Appendix H.

### Critical Freight Routes—A Priority

Alameda County is a global gateway for freight moving by rail and truck. It is also a major warehousing and distribution center for urban goods movement. Because freight transportation makes such an important contribution to the County's economy, it is both necessary and appropriate that the Plan give strategic priority to the movement of freight.

To highlight the strategic importance of freight transportation, this Plan designates each of the mainline railroads serving the Port of Oakland as Critical Freight Routes. It also designates the following interstates as Critical Freight Routes based on volume of truck traffic they serve: I-80; I-880; I-238 from I-880 to I-580; and I-580 from I-238 east to the County line.

The following additional routes, which carry less truck traffic, are designated as Major Freight Routes: I-680; I-980; Mission Boulevard between I-880 and I-680; SR-92 from I-880 to the San Mateo Bridge; SR-84 from I-880 to the Dumbarton Bridge; and Hegenberger Road, from I-880 to the Oakland International Airport.

The CMA intends that highways designated as Critical Freight Routes be operated in a manner that ensures that freight can be moved with maximum efficiency. To this end, the CMA will seek funding for operational improvements to ensure that congestion from commute traffic does not negatively affect Critical Freight Routes during midday hours.

## PLANNING GUIDELINES

Planning guidelines are designed to:

- Strengthen the connection between transportation and land use, including policies and criteria to define TOD;
- Ensure that designated "hubs," where transportation services connect and "gateways," which act as points of entry from other geographic areas, are approached strategically; and
- Encourage city, county, regional and state authorities to cooperatively manage traffic in identified corridors or areas through corridor/area management planning.

### Strengthening the Transportation and Land Use Connection

The CMA is committed to making transportation decisions that contribute to the health and vitality of the full range of neighborhoods and communities that constitute Alameda County. Transportation is one part of the complex equation that makes up community vitality. The CMA Board encourages local decisionmakers to consider transportation in developing community plans.

The challenge for the CMA is to make transportation and land use development support one another and to identify opportunities for transportation investment that will improve the quality of life. A primary

function of the CMA, in collaboration with the four planning areas, is to set countywide transportation priorities. At the same time, the CMA recognizes that land use and community development decisions are the purview of local government. In this spirit, the CMA encourages community plans that:

- Encourage residents to use a range of travel modes—including transit, walking, biking—to access jobs, shopping, recreation and other daily needs.
- Provide that the streets, transit, and pedestrian and bicycle ways are part of an integrated system of routes.
- Develop housing and regional activity centers that are accessible to the regional transit network.
- Provide for a diversity of development and other TOD transportation strategies designed to make it easier to get the basic necessities of living within each community.
- Design streets and other transportation facilities and amenities that are integrated into the overall community design, and are as conducive to a sense of community identity and pride as they are to accommodating automobiles.

## Strategic Treatment of Hubs and Gateways

Hubs and gateways play a critically important role in the transportation system, but their strategic importance has been neglected in most plans.

### Hubs

Hubs are transfer centers where transit passengers make connections from one type of transportation to another, such as from AC Transit to BART. These connections are called "intermodal." The CMA intends that convenient connections and transfers be incorporated into all plans for major transit investment.

Intermodal hubs and terminals play an important role in moving both passengers and freight. Planning for intermodal freight operation is well advanced, thanks to the private initiative of the maritime industry, railroads, trucking and the Port of Oakland. Funding for intermodal access improvements at the Port is included in the investment element of the plan.

Passenger transfers between transit systems have been more challenging. From a strategic point of view, the transfer arrangements that are most important are those between BART and:

- Santa Clara County's heavy- or light-rail system;
- Bus services such as those at the Fruitvale BART Station;
- Capitol Corridor Service;
- The County's emerging HOV/express bus network;

- Long-distance rail service, such as the Altamont Commuter Express (ACE); and
- Airport connections.

The location of future BART stations and other regional transfer centers are critically important because they will become the predominant transit hubs—where people move from one system to another—of the next generation. Their location and design should be determined in light of this critical role. Signs that clearly identify BART stations and other major transit hubs are another important factor in encouraging transit use, and the CMA supports coordinated signage efforts.

It is the CMA's intent that all plans for major transit investment incorporate convenient connections and transfers. Plans for HOV lane projects should include permanent Park-and-Ride facilities and special design features needed to enhance express and/or subscription bus service.

### Gateways

Gateways serve two functions: they provide access from one geographic area to another and they constrain—and thus meter—the flow of traffic as it enters metropolitan corridors. By setting policy limits on the number of vehicles that can pass through gateways and by tolerating moderate congestion at these locations, congestion can be prevented at other locations where it would be much more disruptive to the operation of the transportation system.

Gateways in Alameda County include: Altamont Pass; Vasco Road; the Caldecott Tunnel; I-580 through Dublin Canyon; I-680 at the Sunol Grade; the Albany Narrows; the Oakland-San Francisco Bay Bridge; and the Dumbarton and Hayward-San Mateo Bridge approaches to I-880.

This Plan embraces the use of geometric metering as a congestion management strategy. It works where it is necessary to meter mainline traffic flows at one location in order to shelter other, more critical segments of the freeway system from severe congestion. That means keeping a main arterial road at two lanes with safety improvements instead of widening it to four lanes, which might overwhelm the highway to which the road connects.

Over time the use of electronic toll collection to implement gateway pricing may provide a more attractive method for achieving the same results. For the short term, to protect busy roads from severe congestion, the CMA supports priority treatment at selected gateways for buses, carpools and commercial vehicles engaged in commercial service, as long as people can still travel safely under congested conditions.

## Corridor/Area Management Planning

The CMA intends to involve local governments and transit agencies as full partners in the process of corridor/area management. Consistent with the requirements of SAFETE-LU, the CMA intends that

corridor/area planning be continued on a cooperative basis that engages local transit operators, local governments, the CMA, MTC, Caltrans and Association of Bay Area Governments (ABAG).

While each jurisdiction can contribute individually to strengthen the ties between transportation and land use, no single jurisdiction or agency—acting alone—can resolve issues posed by corridor or area-wide traffic. However, local jurisdictions working together can:

- Reconcile the competing demands that local and long-distance traffic make on the capacity of the freeway system.
- Reconcile continuing population and employment growth with the limited capacity of the freeway system.
- Reconcile the movement of people and goods.
- Prevent pass-through traffic from using local streets.
- Reconcile HOV lanes with plans to meter freeway ramps.
- Pair ramp metering with geometric metering at regional gateways in order to balance the demands of the freeway system.
- Coordinate the operation of the freeways and parallel arterials and determine when and where to rely on transit as a corridor's primary strategy of traffic management.

These issues are difficult to resolve in the context of countywide planning for the countywide system. The appropriate management strategy should be determined for each of the County's major corridors/areas on an individual basis. Corridor planning and area planning are essential because they allow active local involvement, detailed analysis of operations and choices that are tailored to fit the circumstances found in each corridor/area. At the same time, coordinated planning is necessary to ensure that each corridor/area serves its function in the countywide system.

With cooperative transportation planning among all local agencies there are significant opportunities to manage corridor/area traffic more effectively. For example:

- Ramp and geometric metering can be combined in an effective strategy for managing freeway traffic if localities can be assured a meaningful voice in developing and adjusting the metering strategy.
- HOV lanes can be operated most productively if express bus service can be incorporated in their design and operation.
- Investments in rail transit are most likely to be productive if they are complementary to local planning for zoning and traffic circulation.
- Efforts to offset the traffic impacts of major development projects are most likely to be effective if local officials can agree on common mitigation requirements.

- Transportation investment is most likely to create development opportunities (where development is desired) if transportation and land use planning are better coordinated.
- Rights-of-way (those areas that run alongside freeways and rail lines) can be protected from encroaching development if transportation and land use planning are better coordinated.

The CMA intends that corridor plans include a cooperative program that address short-term improvements for operations, and long-term capital improvements and land use measures that complement operations and capital improvements (such as requirements for developers to play a role in reducing traffic and local zoning that supports transit). Corridor plans completed to date include: I-880; San Pablo Avenue/I-80; I-680; and the Tri-Valley Triangle Study. These plans will need to be updated periodically. On going studies include the Central Alameda County Freeway Study funded by ACTA, which is similar to a corridor study, but focuses on freeway mainline improvements per state statute.

The CMA will give operational improvements and major capital projects identified in the corridor plans priority to receive funding.

The following statement of goals, principles and work program gives explicit recognition to the authority of local government in the field of land use planning, and provides a basis for developing corridor/area management planning.

## Principles and Goals

1. Land use planning is solely the purview of local governments.
2. Concurrent planning of transportation and land use is not intended to usurp or preempt local land use control.
3. The goal of corridor/area management planning is to ensure that local governments are involved as full partners in planning for corridor/area traffic management.
4. Local governments, the CMA, MTC, Caltrans, ABAG, Bay Area Air Quality Management District (BAAQMD) and transit agencies have a shared interest in more effective communication about transportation and land use.
5. A cooperative planning effort is necessary to ensure effective management of the transportation system and coordination with land use planning.
6. Cooperative planning of transportation and land use is intended to ensure that cumulative/regional transportation impacts of local development can be mitigated through local and regional investment and sustained through effective management.
7. Corridor/area management planning should be reached by consensus. A consensus is considered to include local approval of corridor/area plan even though a local jurisdiction may not subscribe to specific aspects of the plan.

## Work Program

### Phase 1 Work Program

1. With the participation of local governments and other public agencies, identify the boundaries of the County's primary transportation corridors and the jurisdictions which should be involved in the development of a traffic management strategy for each corridor/area.
2. Develop a program that recognizes the limitations of local staff resources.
3. With the participation of local governments and other public agencies, identify traffic management issues that could be subject to early resolution. Some strategies might be:
   - Develop a program of short-range operational improvements needed to expedite freight movement.
   - Develop a coordinated approach to signal timing on major arterials that cross jurisdictional boundaries.
   - Develop guidelines for local jurisdictions to consider the implementation of ramp metering.
   - Integrate bus service in plans for HOV lanes, ramp metering and arterial street operation.
   - Implement design guidelines that support alternative modes of travel.
4. With the participation of local governments and other public agencies, select one or two strategies for implementation in Phase 2.

*Decision Point to Move to Phase 2*

### Phase 2 Work Program

1. Develop initial implementation plan based on recommendations from Phase 1.
2. Work with local governments and other public agencies to develop goals and objectives for the Phase 3 Work Program.
3. Reach corridor/area consensus on a Phase 3 Work Program for transportation and land use coordination. Phase 3 is subject to the limitations of local staff resources.

*Decision Point to Move to Phase 3*

**Phase 3 Work Program**

1. Based on the consensus reached on the goals and objectives for Phase 3, develop a framework and provide support that allows community within the corridor/area to demonstrate how the community's share of cumulative/regional transportation impacts could be mitigated through cooperative planning and investment.
2. Support, where appropriate, local plans to enhance the productivity of transit investment through supportive zoning, urban design and development approvals.
3. Incorporate corridor/area management plan into local plans when appropriate.

## PRICING POLICIES AND OTHER INCENTIVES

Pricing policies and other incentives are intended to preserve the ability to travel while protecting air quality.

### Conservation Pricing

Historically, federal highway policy was designed to foster rural mobility and motorization and to encourage the growth of the automobile and oil industries. The result was government subsidizing rural highway improvement and a pricing policy that kept fuel taxes as low as possible.

In contrast, European nations have long imposed much higher fuel taxes than those in the United States—creating an incentive for fuel conservation and a source of revenue to finance transit operations. The European approach is called "conservation pricing." European countries take an aggressive approach to conservation pricing—with most nations charging fuel taxes that exceed $3 per gallon. An equally aggressive approach would be inappropriate in the United States.

As a first step toward a more gentle form of conservation pricing, the CMA endorses gradual increases in the fuel tax. This approach would emphasize a combination of fuel taxes and fuel sales taxes that have the flexibility to be used for transit improvement and local street and road maintenance. Such increases should be sufficiently gradual to ensure that there are no adverse economic implications for California or the Bay Area.

### Lane Pricing

The CMA has prepared feasibility studies to determine if congestion pricing, as a means of managing congestion on I-680 and I-580, is feasible within Alameda County. This type of pricing offers motorists the choice of paying a fee to use a faster moving designated lane and reducing their time in traffic. The studies analyzed the operational, geographic, financial and political feasibility of HOT lanes. Preliminary findings for the I-580 HOT Lane indicate that a congestion pricing project may be feasible. The final study was completed in Spring 2008.The project development process is underway with expected opening to traffic in 2011. The I-680 study found that a HOT Lane is feasible. Design of roadway and toll system

improvements is complete. Roadway construction began Fall 2008 and is expected to be open to traffic Fall 2010.

## Regional and Statewide Incentives

The CMA also endorses developing regional or statewide policies which provide:

- Tax benefits for workers who share rides and use public or non-motorized transportation; and
- Financial incentives to use an alternative form of transportation to work.

## Telecommuting and Work-at-Home Arrangements

The share of the Alameda County residents who worked at home decreased from 3.9 percent in 1990 to 3.5 percent in 2000, compared to 1.7 percent in 1980. Much of this increase from 1980 is attributable to the growth of telecommuting. Appropriately, the movement of data on "information highways" can reduce the need to move vehicles on conventional highways. Since telecommuting can play a significant role in managing the transportation system, the CMA will actively pursue establishing and implementing telecommuting programs.

## SUMMARY OF MANAGEMENT STRATEGIES

Based on the above discussion, the following management strategies and policies will be implemented:

- Secure funding sufficient to eliminate the maintenance backlog within 25 years.
- Give strategic importance to the maintenance and operation of existing facilities.
- Give strategic priority to the movement of freight. Focus investment and system management to ensure that congestion does not impair operation of critical freight routes during midday hours.
- Improve system performance by coordinating and developing major freight and passenger hubs.
- Manage gateways to ensure balanced highway operation.
- Involve local governments and transit agencies as full partners in the process of corridor/area traffic management.
- Endorse a gradual increase in the fuel tax and fuel sales tax, which have the flexibility to be used for transit improvement and local street and road maintenance.
- Endorse continued study of pricing mechanisms such as HOT lanes. If proven feasible, revenues generated by HOT lanes would remain in the HOT lane corridor and would be used to operate the facility, augment transit service and fund capital improvements.
- Endorse developing local and statewide policies which provide tax benefits for workers who use alternative modes to commute and provide financial incentives for the use of alternative transportation for commuting to work.

- Encourage developing home-based telecommuting programs in the public and private sector.
- Encourage strategies that manage congestion and reduce transportation's share of greenhouse gas emissions as described in the attached paper entitled "The Broad Outlines of a Plan for Managing Congestion and Reducing $CO_2$ and Pollutant Emissions in Alameda County" (Appendix I), which was presented to the CMA Board at its February 2008 retreat.